Webac Vibrator
Gesellschaft für Vibrationstechnik mbH

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Mounting and Operating Instructions
Pneumatic Ball Vibrator Series VK
Pneumatic Roller Vibrator Series VR

GENERAL INFORMATION:

The Pneumatic Vibrators of type VK and VR produce rotary vibrations with different frequencies and oscillation width depending on the air pressure and mass. The vibrators allow to be operated indoors as well as outdoors. However, they are not suitable to be operated inside of liquids of any kind.

Admissible ambient temperature: from 0°C to maximum 80°C (in explosive areas maximum 40°C)
(Higher operation temperature are allowed after consultation with the manufacturer. On temperatures over 80°C metallic sound absorbers and hose fittings have to be used. Furthermore higher temperatures may cause changes in the colour of the anodisation)
Admissible operating media: clean and oil-free compressed air or nitrogen
(For an ideal durability, we advise the usage of easily oiled compressed air (VR) and oil free compressed air (VK).)
Admissible operating pressure: from minimum 2.0 bar ü (30 PSI) to maximum 6.0 bar ü (90 PSI)

CAUTION: The maximum operating pressure of 6 bar ü (90 PSI) must not be exceeded.

When employing the enclosed silencer in its perfect mounting condition, i.e. without any shaking or self-resonance of the construction, the vibrators generate a noise level of a maximum 60 to 75 dBA. We advise the usage of hearing protection.

MOUNTING and COMMISSIONING:

Prior to mounting, the vibrator has to be checked for any obvious visible damages resulting from transport and storing. The vibrator must be mounted fixedly and resistant to vibrations to the prepared fastening holes. The mounting surface must be levelled and clean. We recommend a welded-on U-shaped profile or a big-sized base plate with strongly rounded edges to be used as a support. When using the vibrator outdoors avoid rain water or any other liquids to flow into the vibrator via the exhaust air opening. If required, an exhaust pipe with has to be installed in downward direction.

For the fastening of the vibrator, use threaded bolts having a minimum tensile strength quality 8.8. The fastening torque should not exceed or fall below the following values:

VK 8 / 10 / 14	VR 17 / 29	M 6	minimum 6 Nm: maximum 10 Nm
VK 16 / 22	VR 47 / 78	M 8	minimum 15 Nm: maximum 21 Nm
VK 26 / 30	VR 97	M 10	minimum 30 Nm: maximum 42 Nm

Use appropriate screw retention rings like serrated lock washers, retainer rings, etc.. With longitudinal bores, use additional washers. Additionally, you may also employ screw-fastening adhesive of medium hardness (e.g. Loctite 270). With this, observe the instruction of the manufacture.

CAUTION: Missing bolts may lead to tearing-off and falling-down of the unit.

The inlet and outlet bores are marked with arrows, with the inlet bore having a smaller opening than the outlet bore. Please make sure that all connections between the hose nozzle are mounted in accordance to the valid instructions. Observe the instructions of the hose manufacturers.

CAUTION: detaching pressure hoses or hose nozzles may cause injuries on the eyes, etc.

Mount the enclosed silencer to the outlet opening. Being operated without silencer, the vibrator causes an extreme noise load.

CAUTION: Any operation without silencer is not admitted. The outlet opening creates a very loud noise when blowing out compressed air, which may cause injuries on the ears and eyes.

COMPRESSED AIR SUPPLY:

In order to be able to operate the vibrators with full performance, make sure to use an air compressor having a sufficient air and filter capacity and capable of easily generating the required air quantities per minute as per the following list:

VK 8	175 Ltr./min	VR 17	200 Ltr./min	VK 16	225 Ltr./min	VK 26	380 Ltr./min	VK 10	175 Ltr./min
VR 29	250 Ltr./min	VK 22	275/Ltr./min	VK 30	500 Ltr./min	VK 14	200 Ltr./min	VR 47	325 Ltr./min
VR 97	850 Ltr./min	VR 78	550 Ltr./min						

If the vibrator works very quickly on the constructive mass, it may be possible that the output vibration energy is too weak. In this case, the result of the vibration process is surely unsatisfactory and the wear of the unit is high. Here, we recommend to employ a bigger vibrator in order to gain better results and to conserve the unit.

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Mounting and Operating Instructions
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Pneumatic Roller Vibrator Series VR
CE declaration of conformity

OPERATION IN AN EXPLOSIVE ENVIRONMENT: **ATEX classification:** II 3D 85°C (T6)X

Operating conditions:
The Pneumatic Ball Vibrators of the series VK and the pneumatic Roller Vibrators of the series VR are operative means of category 2 and are allowed to be employed Zone 22. Make sure, that powder in the environment has a minimum ignition temperature of over 85°C.
The admissible ambient temperature in Ex zones (explosive zones) is from 0°C to +40°C.
Admissible operative media: clean and oil-free compressed air (VK) respectively easily oiled compressed air (VR) and or nitrogen up to a maximum of 6 bar and a maximum of 40°C.

Potential equalisation:
Make sure on mounting that the vibrator housing is electrically connected to the system of potential equalisation of the installation!

Use:
The above-mentioned operating conditions must be strictly observed. In the case the vibrator is employed in a way that its function may be of importance in view to technical safety, the function must be strictly monitored.

CE DECLARATION OF CONFORMITY

With this, we declare in the scope of our own responsibility that the devices indicated in the following text are in full conformity with the regulations in the sense of Guideline 94/9/EG (ATEX) and 98/37/EG (machinery guidelines).

Pneumatic Turbine Vibrators of the series VK: VK 8; VK 10; VK 13; VK 16; VK 22; VK 26; VK 30
Pneumatic Roller Vibrators of the series VR: VR 17; VR 29; VR 47; VR 78; VR 97

The conformity of the devices has been verified through the following specifications:
EN 1127-1; EN 292-1-2; EN 13463-1; EN 1050

This declaration will lose its validity with constructional changes, with deviations from the operating parameters indicated by the Operating Instructions, or with any use of the devices which is not in accordance with their original intended use.

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Mr. Siegfried Anczikowski
Sales Management

OPERATION and MAINTENANCE:
Check the vibrator an hour after its first operation and one time per month to ensure that all bolts, hose nozzle and silencers are still perfectly fixed.

In the case the vibrator works too slow, take off the silencer. If then the vibrator works normal again, clean or replace the silencer. Proceed in the same way with regard to the air filter.
CAUTION: when operating the vibrator without the silencer, wear an ear protection device.

Potential faults leading to a reduced performance:
- The capacity of the compressor is too small, i.e. its output of litres/minute is too small (replace)
- The cross-section of the compressed air supply hose is too small or the hose is too long (replace or shorten)
- The silencer is strongly polluted (cleanse in paraffin oil or replace)
- Leaks in the piping (check the compressed air supply by means of leak indication spray)
- The air filter is strongly polluted (cleanse in paraffin oil or replace)
- Sharp bents and/or squeezing of the compressed air hose (replace or shorten)

Damaged devices must not be operated. Check the perfect functioning of the vibrator after 5,000 operating hours at the latest. After 8,000 operating hours, replace the bearings and any worn wear parts (e.g. rollers, balls or raceways). With repairs, only original spare parts of the manufacturer must be used! All parts allow to be recycled. Store the Operating Instructions for any later employment.